

## 23.1.2

### SAT is NP-Complete

# NP-Complete Problems

## Question

Are there any problems that are **NP-Complete**?

## Answer

Yes! Many, many problems are **NP-Complete**.

# Cook-Levin Theorem

## Theorem 23.7 (Cook-Levin).

**SAT** is **NP-Complete**.

Need to show

1. **SAT** is in **NP**.
2. every **NP** problem **X** reduces in polynomial time to **SAT**.

Might see proof later...

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**THE END**

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**(for now)**